

Listing of Claims:

1 – 8. (Cancelled)

9. (Original) A method for producing a localized sound in a maternal abdomen, the method comprising the following steps:

generating a first carrier signal at a first ultrasound frequency;

generating a second carrier signal at a second ultrasound frequency;

applying the first carrier signal to a first ultrasound stimulation transducer to produce a first focused beam; and

applying the second carrier signal to a second ultrasound stimulation transducer to produce a second focused beam;

placing the first and second ultrasound stimulation transducers on the abdomen and directing each of the first and second focused beams at a head of a fetus in utero to form a stimulation signal at the intersection of the focal points, wherein a resultant force at an intersection of the focal points of the first and second focused beams vibrates the middle ear of the fetus in the audio range.

10. (Original) The method as defined in claim 9, wherein the difference between the second ultrasound frequency and the first ultrasound frequency is a frequency in the audio range.

11. (Original) The method as defined in claim 9, further comprising the step of detecting audio-induced motion of the fetus with a Doppler motion detector.

12. (Original) The method as defined in claim 9, further comprising the steps of:
focusing a receiving transducer for detecting signals in the same frequency range as the stimulation signal at the same location as the ultrasound stimulation transducer;
and

monitoring a reflected signal to detect a Doppler shift indicative of motion of the fetus.

13. (Currently Amended) A stimulation device for stimulating hearing in a fetus in utero, the stimulation device comprising:

a first RF generator generating ~~an~~ a first ultrasound signal at a first frequency;

a second RF generator generating ~~an~~ a second ultrasound signal at a second frequency, the difference between the first frequency and the second frequency being in an audio frequency range;

a first ultrasound transducer electrically coupled to receive the first ultrasound signal; ~~and~~

a second ultrasound transducer electrically coupled to receive the second ultrasound signal;

wherein each of the first and second ultrasound transducers are operable to convert one of the first and second RF signals to a focused beam, respectively and are positioned to direct the first and second focused beams to intersect at a position selected to stimulate the fetus; a strip chart recorder; and

a strip chart marker switch electrically coupled to the strip chart recorder, the strip chart marker switch being selectively activated to provide an indication to the strip chart recorder when a motion of the fetus is detected.

14. (Cancelled)

15. (Currently Amended) ~~The apparatus as defined in claim 13 further~~
~~comprising:~~ A stimulation device for stimulating hearing in a fetus in utero, the stimulation
device comprising:

a first RF generator generating a first ultrasound signal at a first frequency;

a second RF generator generating a second ultrasound signal at a second
frequency, the difference between the first frequency and the second frequency being in an
audio frequency range;

a first ultrasound transducer electrically coupled to receive the first ultrasound
signal;

a second ultrasound transducer electrically coupled to receive the second
ultrasound signal;

wherein each of the first and second ultrasound transducers are operable to convert
one of the first and second RF signals to a focused beam, respectively and are positioned to
direct the first and second focused beams to intersect at a position selected to stimulate the
fetus; a strip chart recorder;

a strip chart marker switch electrically coupled to the strip chart recorder, the
strip chart marker switch being selectively activated to provide an indication to the strip chart
recorder when a motion of the fetus is detected;

a fetal monitor probe adapted to be acoustically coupled to the fetus; and

a Doppler fetal monitor electrically coupled to receive a signal indicative of
motion from the fetal monitor probe.

16. (Original) The apparatus as defined in claim 15, further comprising:
- a strip chart recorder; and
 - a chart marker, the chart marker being electrically coupled to receive a signal indicative of fetal motion from the Doppler fetal monitor and to provide a signal indicative of fetal motion to the strip chart recorder when a fetal motion event is detected.